

VZCZCXYZ0008
RR RUEHWEB

DE RUEHSJ #0873/01 1292216
ZNR UUUUU ZZH
R 092216Z MAY 07
FM AMEMBASSY SAN JOSE
TO RUEHC/SECSTATE WASHDC 7939
INFO RUEHMU/AMEMBASSY MANAGUA 4906
RUEHZP/AMEMBASSY PANAMA 3601
RUEHGT/AMEMBASSY GUATEMALA 3782

UNCLAS SAN JOSE 000873

SIPDIS

SENSITIVE
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E.O. 12958: N/A

TAGS: [EINV](#) [ECON](#) [SENV](#) [ENRG](#) [CS](#)

SUBJECT: PARADISE BY CANDLELIGHT: COSTA RICAN POWER FAILURE

REF: SAN JOSE 00653

[¶1.](#) (U) This is another installment in our ongoing series explaining why Costa Rica is not quite paradise. These cables seek to paint a realistic picture of the challenges faced by Costa Rica. Travel brochures don't tell the entire story.

[¶2.](#) (U) SUMMARY. Costa Rica's electrical generation system collapsed on April 19 as the country suffered its first nation-wide blackout in six years. Parts of the nation were without power for the next 24-48 hours. Rolling blackouts (except on weekends and holidays) began on April 26. The collapse resulted from the combination of a severe dry season as well as the failure of the National Electrical Institute (ICE), Costa Rica's state power and telecom monopoly, to both adequately maintain its own equipment and to invest in increased capacity. ICE initially stated that power shortages were likely to continue unless the state regulator allowed a 23 percent rate hike. Meanwhile, businesses in Costa Rica suffered. While President Arias announced the end to rolling-blackouts on May 4, experts from General Electric tell us there are no quick or easy solutions to Costa Rica's long-term problem of a lack of spare capacity. END SUMMARY.

It All Comes Crashing Down

[¶3.](#) (U) On Thursday April 19, Costa Rica's electrical power system failed just after 8:00 PM local time, triggering a country-wide blackout that lasted for one and a half hours. Parts of the country were without power for the following 24-48 hours. According to ICE, the state-owned power and telecom monopoly, the collapse was due to the combination of a "rainy-season" with very little rain that has left the country's hydroelectric resources at 25 percent of normal capacity and the breakdown of three turbines and two major transformers over the course of two weeks. This, coupled with an ever-increasing demand led to a situation where demand outstripped capacity, leading to a system-wide shutdown of the grid.

Can't Meet Current Demand

[¶4.](#) (U) Over the last five years, ICE has not adequately invested in its electrical generation capacity, as projects in the works for years continued to face delays. Environmental groups have derailed or postponed plans for two major hydroelectric projects planned in environmentally sensitive areas. Major thermal (fuel-burning) projects have also faced delays. For the last four years ICE has planned on constructing a 120-megawatt plant in Garabito. According to the original timeline, the plant should have already been in operation. Construction has not yet begun due to contracting disputes (not unusual in Costa Rica).

[¶5.](#) (U) Costa Rica has long prided itself as a "green" country that makes extensive use of non-thermal sources of electrical power and has a history of using renewable sources to provide the vast

majority of its power. While that is still true, over the last two years there has been a dramatic increase in the use of thermal generators as well as purchases of electricity from neighboring countries. Previous to 2006, approximately 6 percent of the electricity consumed in Costa Rica came from thermal generators. In 2006 this figure had risen to 20 percent as Costa Rica purchased more of its power from suppliers in Panama.

¶16. (U) This shift toward the increasing use of thermally-generated electricity came as the price of oil also rose, dramatically increasing the cost to ICE of generating electricity from thermal sources. It costs ICE an average \$0.03 per kilowatt-hour to produce electricity in hydroelectric plants, \$0.14 from their thermal plants, and between \$0.08-0.13 per kilowatt-hour to import thermal-generated electricity (not including transportation costs) from neighboring countries. Due to its own power shortages, Panama is no longer exporting electricity to Costa Rica.

¶17. (U) In the first three months of 2007, ICE has already exhausted 86 percent of the USD 66.3 million budgeted to run the country's diesel-fired electrical generators for the entire year. After the power outage of April 19, ICE requested the state Regulatory Authority for Public Services (ARESEP) to approve a 23 percent increase in electrical tariffs to pay for the purchase of thermal-generated power. ARESEP denied the request, stating that ICE must explain how the electrical system was allowed to fall into disrepair in the first place. In response, ICE began implementing rolling blackouts on April 26.

Can't Meet Future Demand, Either

¶18. (U) While Costa Rica has not adequately invested in new electrical generation projects and is currently unable to purchase power from Panama, electrical demand has continued to grow at an average rate of 6 percent a year. Over the last year, Costa Rica's economy grew by 7.9 percent. Manufacturing and Foreign Direct Investment (largely in the form of construction in coastal areas) served in large part to fuel this growth, increasing their rate of real growth by 12.5 percent and 14.8 percent respectively in 2006. The rapid increase of manufacturing and construction has placed new demands on Costa Rica's stagnant electrical power generation system, leading to a situation in which ICE will need to invest USD 7 billion (USD 500 million annually over the next 14 years) to effectively double power capacity by 2021 and meet projected demand. Before the crisis, ICE had no finalized projects to increase electrical generation capacity during the next two years.

The Cost of the Energy Crisis

¶19. (U) News reports have already put the economic impact of the current energy crisis at anywhere from USD 20-100 million. The U.S. multi-national paper company, Kimberly-Clark, reported that the power outages from April 19-20 cost the company USD 174,652. Intel lost a reported 150,000 microchips that were on its production floor when the power failed. News accounts have been rife with stories of private businesses closing their doors during the rolling blackouts and losing clients and production capacity.

What Comes Next?

¶10. (SBU) To cut through the maze of speculation and conflicting blame, Embassy officials met with four experts from General Electric on May 2. While lauding Costa Rica's efforts to use renewable sources for the majority of its power production (80 percent), the experts stated that Costa Rica's current crisis is due to a failure to maintain any reserve thermal capacity that could be brought fully online when circumstances warrant. Now, Costa Rica is faced with a situation where they need to make critical decisions in a short period of time to prevent recurring power crises in the coming years. The GE team said their company had seen this crisis coming for years, but their approaches to the GOCR (the latest in December 2006) had been ignored or rebuffed.

¶11. (SBU) Even if ICE were to purchase new thermal turbines immediately, it would normally take 24-36 months to receive and

install them, leading to another 2-3 years of annual energy shortages at the end of the dry season. GE said that there are several alternatives to meet Costa Rica's immediate energy needs in the next 1-2 years, while the longer-term capacity is being delivered and installed. GE originally intended to offer Costa Rica the option of delivering truck-borne turbines in the next 60-90 days to meet the country's short-term energy needs but was rebuffed. Instead, on May 4 President Arias announced that the rains had sufficiently filled the reservoirs and a new hydroelectric turbine was brought online ahead of schedule. As a result, according to Arias, there is no need to continue the rolling blackouts.

¶12. (SBU) The GE experts said that for any short-term solution to succeed, Costa Rica also needs to simultaneously purchase additional thermal generators. The experts informed the Embassy that due to increasing worldwide demand for power generation equipment, Costa Rica has a very short window of opportunity to place orders for equipment that could be delivered and installed in time to prevent outages next year. The largest impediment to this solution, according to the industry experts, would be the failure of ICE and Costa Rican government to move rapidly in making and implementing decisions.

COMMENT

¶12. (U) Costa Rica's energy crisis has not come as a great surprise. Experts and press have repeatedly warned over the last two years that ICE needed to adequately invest in new capacity to avoid the current situation. Unfortunately, this was not done. The lack of real development of the sector, coupled with the general slow-moving decision-making process in Costa Rica does not bode well for Costa Rica's future energy security. While the beginning of the rainy season may have filled the reservoirs and brought a temporary end to the current rolling blackouts, only difficult and uncharacteristically quick action by the GOCR and ICE over the next few weeks, which now seems highly unlikely. Originally, the Arias administration drafted an emergency decree to give ICE and the GOCR more flexibility to quickly make timely and necessary decisions. However, the emergency decree was never signed, and there is no indication that Costa Rica is currently pursuing long-term solutions that could forestall what will probably be even worse energy crises during the next few years.

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